ARGUMENTS

Rejection of Claims on Art Grounds in the 03/15/2004 Office Action, and Traversal Thereof

In the 03/15/2004 Office Action, claims 1-14, 20, 25, 29-42, 48, 53, 58, 60-61, 66, 69 were rejected on prior art grounds, under 35 U.S.C. 103(a) as being unpatentable over Kimura et al, (Kimura), US 5,768,590, and further in view of Kelley, US 6,122,757.

Claims 15-19, 21-24, 26-28, 33, 35, 39, 41, 43-47, 49-52, 54-59, 62-65, 67-68, 70 were rejected under 35 U.S.C. 102(b) as being anticipated by Kimura, US 5,768,590.

The above rejections of the claims 1-70 on the stated art grounds are traversed, and consideration of the patentability of the claims 1-70 is requested, in light of the following remarks.

For purposes of clarity, while the office action refers to multiple spellings of "Kelley" the applicant's office action response addresses all such indications as to the Kelley 6,122,757 reference.

Kimura teaches a program generating system for application-specific add-on boards using the language of individuals. This reference relates to translating an initial document, which is in an individual's language, such as English, into a computer code. This reference uses role patterns to effect the translation.

Kelley teaches a code generating system for improved pattern matching in a protocol analyzer. This reference is specific to a protocol analyzer. The types of patterns to which this reference refers are patterns corresponding to a stream of text. The matching of patterns to which Kelley refers corresponds to identifying a specific succession of text.

Regarding the combination of the Kimura and Kelley patterns there is no motivation for one of ordinary skill in the art to combine these two references. The examiner states that although the Kimura patent does not disclose the matching patterns the matching patterns would be obvious in further view of Kelley because Kelley discloses matching patterns. Kimura requires displaying each and every pattern related to a program. These patterns are then used for the translation of the initial document to the computer language. While these patterns are all present in the same program, there is no requirement that the patterns displayed have any element types in common. The Kimura reference also does not require the patterns displayed to match any certain element. Matching the patterns to a certain element before displaying the matching patterns could lead to a nonfunctional program in that some patterns critical to the translation may not be present. Further the patterns referred to in the Kelley reference are streams of text not the "role patterns" of the Kimura reference. Therefore not only is there no motivation to combine these references, the combination would be nonfunctional. Applicant respectfully asserts that this combination of references was made in hindsight, which is not a proper motivation for modification of a reference.

The current invention relates specifically to design patterns for describing design, architecture, or topology of software programs. These are a specific type of pattern and are unrelated to the role patterns of Kimura and the text patterns of Kelley.

Regarding claims 1 and 29, the application specifies that the element type received may be a class, link, or any known object-oriented component of a software program. The Kimura reference relates to a different type of pattern and has no such restriction on the element type received. The Kimura reference specifies receiving an

initial document, which is not equivalent to the element of the current invention. The reference further specifies a given role pattern which is a type of pattern unrelated to the current invention and, therefore, is also not equivalent to the received element of the current invention

Furthermore, the application specifies that the patterns displayed must be matching patterns that (1) all have an associated element in common, (2) may be unrelated to each other, and (3) represent a list from which a user may make a selection. By sharp contrast, the Kimura reference requires displaying a set of role patterns that (1) are all subunits of a given program, (2) must inherently work together, (3) serve as information only and do not represent a list from which a choice may be made by a user. Therefore the reference teaches away from the current invention both by specifying an unrelated type of pattern and by providing different limitations.

The application specifies receiving from a user an indication of a selection of the matching pattern. The application specifies that the user selects a pattern from a list of options that have been displayed as a result of an indication made by the user. The Kimura reference does not allow the user to select a pattern from an equivalent list of options.

The claims further specify receiving an identification of a language. The application relates to applying a new pattern to EXISTING code. Because the software development tool of the invention is applying a pattern to existing software code, the software development tool references the extension of the filename associated with the existing software code to be modified to ascertain the language for applying the selected pattern. So, by the method of the current invention, the identification of a language may

be received through examination of the code to be modified. In rejecting the claim the examiner referenced Kimura abstract, col 4 lines 27-30, col 13 lines 30-40. The language referred to in Kimura abstract and col 4 lines 27-30 is the "language of individuals" not a software language, so these references are irrelevant to the rejection. The Kimura reference as a whole relates to automatically rewriting a program from an individual's language. The "original program" is written from a document in an individual's language and does not have a programming language associated with it, so when the program is rewritten it is not possible to "reference the extension of the filename associated with the existing software code to be modified" as in the method of the invention.

The claims of the application further specify that software code is generated that reflects the modified matching pattern in a computer language. The Kimura reference generates a software code in a computer language reflecting an initial document supplied in an individual's language, but does not generate a pattern in a computer language.

Regarding claims 3, 8, 20, 25, 31, 36, 48, 53, 60, and 66 the Kimura reference cited by the examiner refers to storing _data_ for future use in subsequent steps within the process described by that reference. In the present invention, _in addition to storing the data associated with the method_, comments are stored having embedded pattern information to allow the patterns to easily be detected both textually and through the graphical diagrams to facilitate communicating the pattern's existence and for future design improvements. The Kimura reference does not disclose storing embedded comments. In current practice it is up to the software developer to manually generate the code corresponding to the pattern and tailor it to the given application or project. This manual generation of a pattern instance suffers from a number of problems: first, it is

time-consuming, tedious, and subject to human error; and second, a software developer that is behind in his work will typically skip commenting his code to reflect the use of a common pattern. Hence, other software developers looking to make use of or replace the common pattern cannot easily locate it within the existing code. Conventional software development tools do not address these problems. Therefore, the present invention solves a problem common in the art and is accordingly patentably distinguishable over the prior art.

Regarding claims 5 and 33, the application specifies receiving an indication of a pattern, which is chosen from a list of patterns for software architecture that match an element type. Neither the Kimura reference nor the Kelley reference relates to patterns for software architecture, therefore the references are of no relevance. Also, as previously asserted there is no mention of matching patterns in Kimura, and no motivation to combine Kimura and Kelley. Further, the matching to which Kelley refers is inconsistent with the matching of the current invention, because by the method of the current invention patterns are matched with element types, and Kelley matches streams of text. The examiner is further directed to the foregoing remarks regarding matching.

Regarding claims 7, 13, 35, 41, and 59 the examiner is directed to the foregoing remarks.

Regarding claims 10, 38, and 69 the examiner is directed to the foregoing remarks.

Regarding claims 15 and 43, the present invention relates to design patterns, which describe the design, architecture, or topography of a program. These patterns comprise software elements, which are substantiations of element types as described in

the foregoing remarks. The elements required by the claims are unrelated to the references.

Regarding claims 16, 22, 44, and 63, the software element required by the claims is described by the foregoing remarks and is patentably distinguishable over any component of the reference as has been describe herein.

Regarding claims 17, 23, 45, 51, and 64, the examiner is directed to the foregoing remarks.

Regarding claims 18, 24, 46, 52, and 65 the examiner is directed to the foregoing remarks.

Regarding claims 19 and 47, the examiner is directed to the foregoing remarks.

Regarding claims 21 and 49 the examiner is directed to the foregoing remarks.

Regarding claims 27 and 55 the examiner is directed to the foregoing remarks.

Regarding claims 28, 56, and 68 the examiner is directed to the foregoing remarks.

Regarding claim 57, the present invention relates to design patterns which describe the design, architecture, or topography of a program. The patterns required by the claims are unrelated to the references.

Regarding claim 62 the examiner is directed to the foregoing remarks.

Regarding claim 70 the examiner is directed to the foregoing remarks.

CONCLUSION

In view of the foregoing, claims 1-70 constituting the claims pending in the application, are submitted to be fully patentably and in allowable condition to address and overcome the rejections.

If any issues remain outstanding, incident to the allowance of the application, Examiner Das is respectfully requested to contact the undersigned attorney at (919)-664-8222 or via email at jinang@trianglepatents.com to discuss the resolution of such issues, in order that prosecution of the application may be concluded favorably to the applicant, consistent with the applicant's making of a substantial advance in the art and particularly pointing out and distinctly claiming the subject matter that the applicant regards as the invention.

Respectfully submitted,

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